

INITIAL PERCEPTIONS OF OPEN HIGHER EDUCATION STUDENTS WITH LEARNER MANAGEMENT SYSTEMS

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ABSTRACT

Learner management systems (LMS) are used in open education as a means of managing and recording e-learning facilities as well as improving student engagement. Students benefit from them to become active participants in the decision-making process of their own learning. This study aims to investigate the initial perceptions of students experiencing the LMS for the first time in the Open Education System of Anadolu University with the purpose of identifying the effective and ineffective aspects of it from their perspective and their demands and suggestions for how to improve their engagement in the system. To do this, an interpretive qualitative case study research design was used in order to focus on individual contexts and perceptions formed within those contexts. According to the findings, students were found to have highly personalized and customized user habits and engagement levels with the LMS depending on their varying ages, occupational statuses, IT capacities, and educational backgrounds. In terms of their satisfaction with the LMS, the quality, quantity and variety of content in LMS was found to have a major influence on their initial perceptions of satisfaction.

Keywords: Learner management systems, distance education, learner satisfaction, higher education, educational change.

INTRODUCTION

The advancements in technology come together with inherent characteristics of innovation, diversity and socio-technological dynamism, which create new possibilities for higher education that still need to be explored (Hesterman, 2016). Distance education is one of them, since it has become critical in terms of addressing the educational needs of adults and disadvantaged individuals. Today distance education has naturally been embellished with online features. Online education has recently been an indispensable component of formal education as well as distance education programs. The inclusion of an online component into an existing distance education program largely based on print material is usually possible through the adoption of an e-learning perspective.

E-learning is a planned process that takes place in a different environment than a regular school and thus it requires a special understanding of course design and instruction together with a particular need for a special organisational and administrative approach (Moore & Kearsley, 2007). Similar to educational management, the management of e-learning also comprises of components of planning, organisation, coordination and control of space, time, financial resources, human resources and information in a way that would not fall out of pedagogical principles (Oliveira, Cunha & Nakayama, 2016). The fact that e-learning needs to be managed and organised led to the development of Learner Management Systems (LMSs), which are used to automate the administration of the courses, record student use and student learning process. A strong LMS is expected to

centralize and automate administration of e-learning activities, use self-service and self-guided services, assemble and deliver learning content rapidly and accurately, support mobility, personalize content and enable reuse of it (Vazquez-Cano & Garcia, 2015). An LMS offers various benefits to different stakeholders in the system. Alsop and Tompsett (2002) reported that for policy makers LMS may offer operational benefits such as integration with other management systems like financial or student records, or some strategic opportunities. Significant student data can be extracted from learner analytics, and help educational policy makers to improve student engagement. From the students' perspective, LMS provides opportunities to them to play an important role in the educational activity of making decisions about and managing their own learning, in a way to construct their own learning.

Research on LMS as an e-learning innovation contributes to a better understanding of how to facilitate student learning in an online tertiary education environment, which is supposed to facilitate students' use of different resources and multimodal means. Given the diversity of learners in a distance higher education system with different educational histories, occupational statuses, ages and learning styles and preferences, with a pedagogy of multiliteracies, the LMS is expected to promote a socially and culturally responsive curriculum (Kress & Van Leeuwen, 2011). The flexibility of time and place provided by e-learning is strengthened through LMS. Both the benefits to the administrators and the path it opens to students to direct their own learning has led many higher education organisations world wide to initiate policies to adopt an LMS. In most cases LMS is used on-campus to support formal education or offered as an alternative to it to the interest of some learners who do not want to or cannot commute to campus. In other cases LMS is used as the ground for the facilitation of e-learning for a distance education system.

The ways to plan, organize, manage and control a higher education organization need to be different from that of a regular organization due to its peculiar nature. Likewise, the management of e-learning must be different from regular education. Despite the distinct natures of both, the educational management of e-learning still requires the managers to perform the functions of planning, organization, direction and control in order to manage the resources such as facilities, space, time, money, information and people (Oliveira, et. al., 2016). An LMS, thus, is a great opportunity for managers of e-learning to improve their planning, execution, and evaluation functions of management, especially when it is a well-defined and well-built pattern.

As for this evaluation, or control function, measuring the effectiveness of e-learning systems has become a significant issue both in practice by policy makers and in research. However, there is still a lack of clear theoretical definitions on the relationship between the LMS and the e-learning management. It was noticed that different technological platforms are treated in a generic way and that there is little empirical research focused on the topic (Oliveira, et.al., 2016). In addition, the lack of critical investigation of the LMS used in some universities led to waste of resources and unfulfilled expectations which later turned out to be organizational failures (Pratt, 2005). Although a bulk of research has been published lately on learning in distance education, the area of management and organization of distance education has narrowly attracted the attention of researchers. In an institution as large as this, Open Education Faculty with more than 1 million students spread around the world, a minor weakness may have serious implications for user perceptions. Thus, it is highly significant for the university to assure that LMS is used as effectively as possible. In the case of not being accepted by its intended user, which is the distance higher education student in our context, even the best technology-based systems are deemed useless (Venkatesh & Davis, 2000).

E-learner satisfaction may be defined as an affective response upon the use of eLearning activities on their several aspects such as content, user interface, learning community, customization, and learning performance (Wang, 2003). It was found that student satisfaction in virtual learning environments was generally lower than in traditional classroom settings (Piccoli, Ahmad,& Ives, 2001), yet since then the technical problems

cited in this study have been solved with more improved technologies. In fact, another study found increased student satisfaction between the first and the second deliveries of the same online course (Arbaugh, 2004). All in all, student satisfaction has been found to be a major contributor to continued student participation in e-learning and positively correlated with the quality of learning (Green, Inan & Denton, 2012).

There is a need to discuss how institutions can be guided so that they can make use of their IT resources in order to improve e-learning in their system (Oliveira, Cunha & Nakayama, 2016). This paper is taking a stand in that direction both as its data were selected from learner analytics of the LMS and also because it seeks to understand how the management of LMS should be improved based on student initial perceptions and experiences. In addition, the evaluation of an LMS is essential to its effective implementation and positive impact on the delivery of e-learning (Almarashdeh, Sahari, Zin, & Alsmadi, 2010). When these type of changes are not evaluated timely, institutions are not able to know whether the improvements are working as planned or not, which may result in their making decisions based on the assumptions of a significant stakeholder or a very discontent student. Taking the increasingly competitive positions that distance higher education institutions hold into account, the lack of assessment is likely to place a traditional institution in a difficult position.

Blackboard LMS infrastructure is used to administer and monitor the educational resources in open education system in Anadolu University. This university has been delivering higher education at associate's and bachelor's degrees within the body of Open and Distance Learning System in Turkey since 1982. It also serves in lots of other countries where a Turkish-speaking population exists such as Azerbaijan, Bulgaria, Kosovo, Macedonia, Albania and Bosnia-Herzegovina to nearly 1.3 Million actively enrolled students. According to a study on student profile, almost 75% of its registered students are currently working and 91% of them have access to the internet (Hakan, Ozgur, Toprak, Aydin, Firat, 2014), which implies that they have limited time to study the printed material and therefore largely prefer e-learning materials and environments in a more customized and personalized manner. Inclusion in LMS is completely voluntary in the system as mandating it would result in the segregation of those who do not have access to IT facilities or simply do not choose to be involved in a learning community. Since printed course books are still the primary component of course content and all e-learning materials available in LMS are dependent on course books in terms of content, students who choose to login benefit from the supplementary materials and interaction with instructor and other students, whereas others still utilize the book for content. Although there is a great variety of advanced learning tools offered in the LMS, the rate of students using it is not as high as desired.

The initiation of LMS is an example of educational change, which is considered to be technically simple but socially complex. A large part of the problem of educational change may be less a question of dogmatic resistance and bad intentions and more a question of the difficulties related to planning and coordinating a multilevel social process involving lots of people (Fullan, 2001, p. 45). Therefore, the aim of this study was to catch and document the initial reactions of students to the implementation of LMS in a distance learning community, with a managerial aim to think of ways to counteract the possible resistance to the new system by some students. Research questions that we sought to answer were 1) what are the students' initial perceptions using LMS in an open higher education system? 2) what are the effective and ineffective aspects of LMS for them at first glance? 3) what improvement do students suggest to improve the system?.

METHOD

This study was designed to describe and understand the essence of meanings of individuals who have experienced a particular case. The perceptions of policy makers as to what is critical in the design of an LMS would certainly not fit with those of the students. Aware of this, the selection of the research methodology was done in a way that would capture the students' own perceptions and experiences of using the LMS. E-learning and LMS research

has been dominated by quantitative studies derived from student perceptions; however, they may not accurately provide us with indicators of learning. Rather, a qualitative perspective focusing on individual contexts is necessary to develop a richer understanding. Thus, an interpretive qualitative case study research design was used. Interpretive paradigm stems from a concern to understand the world as it is, at the level of subjective experience; and it regards the social world as an emergent social process created by the individuals (Burrell & Morgan, 1979).

Although quantitative data gathered through questionnaires were also used in order to do quick alterations in implementation as a component of managerial control function, students' initial perceptions and experiences were still in need of comprehension. Five focus group interviews were conducted for qualitative data collection, which has the potential to uncover information that is not included in an online questionnaire, through its open-ended nature, which does not limit the responses of students. Each focus group consisted of minimum six participants with high level of activity and higher amount of time spent in the LMS, and was moderated by the researcher. When selecting participants for a case study like this, it is critical that all of them must experience the case (Creswell, 2009), which means criterion-referenced sampling technique was used to select participants. To do this, first, the list of students all over Turkey with the highest activity rate and highest amount of time spent online in LMS was extracted from learner analytics, and then they were telephoned to ask their consent and availability for a focus group interview session. Among those who agreed to participate, five cities where the biggest number of students were available were selected. Sample size is not usually of significant value in case studies like this, since we are interested in the way meaning is constructed, and large variations of linguistic patterning can emerge from a small number of people (Potter & Wetherell, 1987).

Focus group interviews were conducted with five distinct groups of students in five different cities. A semi-structured interview protocol prepared by the researcher was reviewed by both a peer and a decision maker to ensure validity. The interview questions were prepared based on issues raised by past research as well as issues raised by students in other satisfaction surveys conducted recently, in order to find out their perceptions, problems they face as they experience the novelty and their suggestions for the improvement of the system. The students were all in the early stages of discovering the LMS by navigating it and were achievement oriented, which increased both their awareness and interest in the subject. All groups met in person, and the sessions were sound-recorded as well as a researcher monitoring live, taking notes and interfering when necessary. Participants' consent was taken to record the sounds during the interview, and they were asked to sign a written consent to ensure data confidentiality. The interviews aimed to seek background information about students' general study habits before discussing their learner analytic data concerning LMS participation. The recordings were later transcribed for the purposes of data analysis.

The transcripts of all interviews were analyzed through content analysis, the steps of which are, initial reading, scaffolding, doing the interpretation, and identifying patterns within or across groups or within or across features. The first step of the analysis was to separate the data into units, called "open coding" by Strauss and Corbin (1998). The units, their labels and the categories were displayed by the researcher on a table as suggested by Miles and Huberman (1994). Many of these labels were generated through reading and understanding of the literature or by words or phrases that the teachers repeated.

FINDINGS

The following themes emerged as a result of the data analysis: 1) a completely personalized use of LMS, 2) LMS use as a contribution to the formation of Distance tertiary learner identity and belonging to the system, 3) issues faced and shortcomings, and finally 4) further demands, which will all be elaborated in this section.

The data under the first theme revealed that although students had similar levels of success, they exhibited very different study behaviors. The students were found to display varying approaches to the use of LMS as a supplementary material resource to the unit content. Variation was both found in students' prioritizing their preference of the type of e-learning material and in unit content. For example, while some students never used the unit content but solely the e-learning materials in the LMS such as webinars and e-courses, others used the interactive content in the LMS to assist their self-regulated study of the unit content. The most crucial factor leading to this variation was found to be the amount of time one could devote to studying as the majority of the students enrolled are working. These students felt learner management system improved their time management skills. Other factors include their differing levels of motivation and learning styles. One student from focus group interview no 3 expressed this as follows:

"Open Education system is generally the choice of those who do not have chance to attend formal education.. because we are either housewives or employed..that is why e-kampüs (the name of LMS) has been a blessing to me...I am really happy with it and thank you all...I was about to give up but now I think well maybe I can do it..."

As for the possibilities of interacting with other students in the system, they reflected that although interaction does not lead to success, it adds an element of enjoyment and socialness to studying. Many reported that they do not consider it as a necessity for their learning, which partly explains us the reason for the low level of interest in LMS in student-student interaction facilities. All in all, it would not be wrong to say that LMS use in the participants of this study was found to be highly personalized, and tailored in a way that would meet their varying needs.

Secondly, besides the benefits of the LMS to students' self-regulated study habits and their ability to personalize their learning, it also was reported to contribute to the formation of a distance tertiary learner identity as a member of a renowned institution. Read et. al (2003) claimed that identity and belonging to an institution are very significant for retention, which make them very important concepts especially for institutions like this where LMS participation is not compulsory. Data revealed that the reason why this group of students take more part in the LMS is strongly linked to the sense of belonging to "an open university student identity" they get from it. The quote below, taken from focus group interview no 1 is a clear example to this.

"Open Education system makes you feel you are a student. Formerly we were students, too, but we did not feel it. Now we are really students... "internet student" "

Belonging to an e-learning community is a social identity. Although identity formation is often assumed to be based on commonality, findings suggest that diversity is also a significant factor in the building process of identity. To illustrate, Open Education system of this university serves a diversity of learners including women who were formerly disempowered for education but now have the chance to pursue it through this system. Especially for those who have not been a formal university student before, LMS was reported to be critical in terms of congruence to a more autonomous and pluralist nature of the identity of a "university student". Another major component of this identity also reinforced by LMS is flexibility. This is not surprising as LMS could be considered as a means of learner empowerment, which is assumed to support the idea of diversity behind it, coming from its roots in feminist and community education (Hughes, 2007). As for the empowerment of the learners, findings also suggest that LMS has a huge role in keeping the students in the system by decreasing their exam anxiety and building a sense of confidence. This role is critical when the differing ages, IT capacities and educational backgrounds of students are considered.

The latter two themes are the answers awaited so that the system could be readapted or improved in accordance with them, which are of critical importance from a functional managerial perspective. A distance learner's participation in the LMS has a strong influence on the level of satisfaction s/he gets from online learning (Inan, Yildirim, and Kiraz, 2004) and vice versa is also the case, which means rare use of LMS is related to dissatisfaction (Palmer and Holt, 2009). Although in the literature there is an abundance of studies which report the satisfaction of the students regarding the usability, ease of use or practicality of the systems, in our case students' initial perceptions about their satisfaction mostly referred to what could be considered as content of the LMS, rather than the structure or form of it. In line with this, students came up with issues or shortcomings about the quality of the content of the materials provided to them through the LMS, such as exercise questions /quizzes, chapter summaries and webinars. As for exercise questions and chapter summaries, both quality and quantity were raised as issues to be improved, as they are thought to be major types of material for the revision of course content. Some minor issues raised about the usability of LMS were related to the mobile application of LMS and the problems faced in viewing the answer keys for some quizzes. As a third type of material for which the students participate in the LMS, we have the webinars, which they can both participate in real time or watch the recorded version at their leisure. The most prevalent criticism brought concerning the quality of the webinars was that they were dull, not lively, and did not include interaction. This made the students to choose not to participate in the webinars. In sum, regarding the third theme, students largely raised issues related to the quality and variety of content presented to them via LMS. As for demands raised by the students, variety comes out as a central theme, too, since students expressed a lot of different claims to improve the quality and quantity of materials like quizzes and e-courses.

DISCUSSION AND CONCLUSION

The evaluation of a newly built-in learning management system is a vital step to ensure its effective implementation as acceptance of the new technology is strictly linked to its perceived ease of use by the target users. In some studies it was reported that the difficulties the students experienced with the technology was a strong negative barrier to learning (Schrum & Hong, 2002; Faux & Black-Hughes; 2000, Daley, et al. 2001); whereas others reported that technology does not always result in negative outcomes of learning (DeBourgh, 1999 and Kenny, 2002). Students' initial online learning experiences also play a critical role in forming their perceptions of this delivery medium (Arbaugh, 2004). However, based on the results of this study it should be noted that the quality of content provided through LMS also has a major influence of students' initial perceptions of their satisfaction with the system, as well as service quality or ease of use.

The underlying decision process used by students to determine how to make use of the LMS is considerably more complex than reported before in more positivist accounts (Alsop & Tompsett 2002). Students in our case were found to make highly customized and personalized decisions regarding to what extent to make use of the LMS for academic achievement, which explains this complexity. The multimodal structure that the educational resources in the LMS system are offered was found to be a great asset for students, who had largely tailored their experiences with the system to fit their varying time schedules, learning styles, and varying ICT capacities. This implies that the e-learning materials offered through LMS should be enhanced in a way that students would want to pursue their learning in this environment rather than just focusing on the print content. To bridge the gap between the LMS and the-yet-nonusers, the LMS should be built in a way that is more adaptive and responsive to customized needs of students.

The fact that students turned out to be generally satisfied and that they felt secure while navigating in the LMS led to their being more critical about the quality and variety of the content available. This proves that for LMS content to be effective in learning, the students need to be comfortable with using the system (Green, Inan & Denton, 2012). Although there is a great emphasis on service quality and technology acceptance studies in the realm of LMS (Louwa, Brown, Muller, Soudien, 2009) ensuring overall satisfaction and comfort in

navigating through the LMS is not sufficient in satisfying the students with a need for cognition. Thus, students should be given an active role in the construction of their own educational activities and in decision-making and management of their own learning, and be provided with an abundance of high quality content so that they can be engaged. Similar to Alsop and Tompsett's (2002) findings, the decision making process that e-learners go through to design their use of LMS and thus their learning is highly complex, and is hardly obstructed by technical or interface-related shortcomings. Thus, further research could focus on the significance of content of the e-learning materials as a component of learner satisfaction with the learner management systems.

Finally, building a shared identity and growing a sense of belonging among users is vital in ensuring their participation. That is why although demand for collaborative e-learning is not so high on the part of the users, it should be seen as a way to establish a community for students to identify with and feel belonging, and enhanced. The sense of both "open learner" and "e-learner" identities are another major area of research that could be dwelt on.

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